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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,523	06/19/2007	Shinya Shirasaki	DC10023US (71,051-069)	6866
27305 7590 04/27/2011 HOWARD & HOWARD ATTORNEYS PLLC 450 West Fourth Street Royal Oak, MI 48067			EXAMINER NELSON, LINDSAY ANN	
			ART UNIT	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/598,523

Applicant(s)

SHIRASAKI ET AL.

Examiner

LINDSAY NELSON

Art Unit

1766

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.
2. Amending the claims to require the reinforcing filler to be present in the emulsion composition within the silicone rubber base was sufficient to overcome the previous rejection. The Examiner agrees that the silica filler would, indeed, not be present in the emulsion and as such does not read upon or make obvious the claims as currently written.
3. The Examiner believes the addition of the phrase "5 percent of the water-soluble polymer" was a typo and should have rather read "5 percent of an emulsifying agent". Nonetheless, the Examiner did state that the '751 patent indeed did not contain an addition of water-soluble polymers, and further because the typo was included directly after the mention of an addition of a surfactant it would be believed that one skilled in the art would recognize this mistake as a typo.
4. The Applicants then further argue that the addition of a sodium salt of a polyacrylate such as was found in the '688 patent would not be found to be an aqueous solution. However, the polyacrylates of the '688 patent are added directly to the emulsion, and further are added as thickeners wherein one skilled in the art would realize that a thickener would dissolve in the water contained within the emulsion and, therefore, would form an aqueous solution.

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5. The Applicants further argue that the heat-aging step of the '811 patent wherein the cured product is heated would not have the same effect as that of the heating step of instant claim 12. However, instant claim 12 merely requires that the cured product be heated between 120 and 250 °C, and as such a heat-aging step, such as is disclosed in the '811 patent, would indeed make this step obvious.

### ***Claim Objections***

6. Claims 1 and 4 are objected to because of the following informalities:

7. Claims 1 and 4 both claim "(B<sup>1</sup>) is contained in a proportion ranging from 50 to 250 parts by weight" in line 10 of both claims. However, the claims do not indicate what this measurement is based off of. The instant specification shows, on page 10, that it is per 100 parts by weight of the total of the sum of the components of instant (A), so it is be assumed that the "parts by weight" in this case should be "parts by weight of the total of (a-1) to (a-4) in component (A)", and should be changed for the purposes of clarity.

8. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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10. Claims 4, 14-16 and 20-21 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the aqueous solution of the water-soluble polymer being contained in an amount of from 50-250 parts by weight of the total of (a-1) to (a-4) in component (A), or in a preferable range of 70-200 parts by weight of the total of (a-1) to (a-4) in component (A), does not reasonably provide enablement for the range of instant claim 4 being from 10 to 250 parts by weight. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

11. The instant specification requires that there be, at a minimum, 50 parts by weight of the total of (a-1) to (a-4) in component (A) of the component (B<sup>1</sup>). The instant specification discloses that "component (A) becomes difficult to be emulsified and the expansion ratio of the formed silicone rubber sponge becomes smaller when it is less than 50 parts by weight".

12. The Examiner would like to point out that merely changing the ratio to be 50-250 parts by weight would leave claim 4 substantially the same as claim 1.

### ***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Yamamoto et al, US PG Pub 2004/0152825 (hereinafter Yamamoto).

16. Regarding claims 1 and 4, Yamamoto discloses an emulsion comprising (A) 100 parts by weight of an organopolysiloxane having at least two alkenyl groups and a viscosity of from 0.05 to 500 Pa.s [0088], (B) 0.1 to 30 parts by weight of a crosslinking agent, (C) 50 to 1,000 parts by weight of a polyvinyl alcohol homopolymer or copolymer, (D) 0 to 5 parts by weight of a catalyst, (E) 100 to 100,000 parts by weight of water, and (F) 0.1 to 100 parts by weight of a surfactant wherein component (B) is an

organohydrogenpolysiloxane having at least three SiH groups per molecule (abstract).

Further, Yamamoto discloses that silica may be added to the composition [0092]

wherein the selection of reinforcing silica is obvious for the beneficial impact it has on the mechanical properties of the polysiloxane composition given that polysiloxanes are widely recognized as having undesirably poor mechanical properties. While the range of the aqueous polyvinyl alcohol does not fully encompass that of instant claims, it does at least overlap with the range, and the MPEP states that when a range overlapped, it is

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made obvious over the prior art (In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990)).

17. Regarding claim 2, Example 2 of Yamamoto discloses a method of preparing a silicone emulsion wherein the method discloses mixing the aqueous PVA resin solution with a prepared silicone emulsion which further comprises a surfactant [0109].

18. Regarding claim 3, while Yamamoto does not disclose a process wherein the organohydrogenpolysiloxane and platinum catalyst are separated from the alkenyl-group containing polysiloxane, it is an obvious practice to segregate the base polymer from the crosslinker until such time as it is desirable to use the composition so as to avoid premature crosslinking.

19. Regarding claims 5-6, 8-9, 14-15, and 17-18, Yamamoto further discloses that the surfactants are nonionic surfactants [0078-0079], and the aqueous polyvinyl alcohol is a copolymer with a polymerizable vinyl monomer such as methacrylates [0072] in the presence of sodium catalysts [0059, 0109].

20. Regarding claims 7, 10, 16 and 19, Yamamoto further discloses that the polyvinyl alcohol is contained in a 4% aqueous solution [0069].

21. Regarding claims 11-12 and 20-21, Referential Example 7 of Yamamoto discloses further heating the composition at 140 °C [0129] which is used to dry the product [0094].

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22. Regarding claim 13, while Yamamoto is silent with respect to whether or not the composition comprises air bubbles, one skilled in the art would be motivated to degas the composition to provide a smooth, even coating and as such makes the claim obvious.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINDSAY NELSON whose telephone number is (571)270-7735. The examiner can normally be reached on M-Th, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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/LINDSAY NELSON/  
Examiner, Art Unit 1766

/Marc S. Zimmer/  
Primary Examiner, Art Unit 1765